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ABSTRACT

A three-phase study was conducted in Alberta, Canada, to determine factors influencing reading achievement and specifically to assess the effects of television viewing on reading achievement. In the first phase, 453 people responded to a survey regarding which factors they felt were important in influencing reading achievement. It was concluded that the general public believes that many factors are responsible for influencing reading achievement, with television playing only a minor role. In the second phase, 223 teachers and 44 school librarians responded to a similar survey; analysis of the results suggested that, with minor exceptions, they concurred with the general public on which factors are important influences on the development of reading abilities. In the final phase of the study, children in grades two, four, six, eight, ten, and twelve were surveyed to determine their reading and television viewing habits and attitudes and to assess the relationship between reading achievement, television viewing, and other activities and attitudes. Among the results were that for students in grades four and six there was a significant negative relationship between television viewing and reading achievement, but that for all the other grade levels, reading achievement scores were not influenced by the amount of time watching television. Based on results of all three phases of the study, it was concluded that television is not the most important factor in influencing reading achievement. (GT)

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FACTORS INFLUENCING READING ACHIEVEMENT

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During the past two decades, educators, researchers, and parents have expressed concern over the decline of achievement test scores among school-age children. Although it is unlikely that such a steady decrease can be attributed to one factor, it is a popular assumption that the extent of TV viewing is the main cause of the decline. Studies investigating the influence of TV on social and cognitive behaviour are abundant, yet often yield inconsistent results. The investigations relating TV viewing to educational achievement are no exception. Some of the hypothesized negative influences of television include the allegations that television: (a) displaces other activities such as reading, playing with other children, listening to the radio and going to movies and (b) that children with television are likely to go to bed later. Hypothesized positive influences include (a) increasing a child's vocabulary and (b) exposure to ideas and events that would not be available without television.

An initial examination of the research investigating the relationship between school achievement and TV viewing leaves one feeling slightly confused. Some investigations report that television viewing is likely to increase a young child's vocabulary and knowledge about the world. Other investigations report that heavy viewers of television have lower school achievement scores while still other researchers report that TV viewing has no significant effect on educational performance scores. A conclusion reached by many recent studies reveals that television may be only one variable amongst many others (e.g., individual differences variables, home environment) which influence school achievement.

The present investigation was designed to investigate the contribution of television viewing behaviour, environmental variables and individual differences variables on reading achievement. The project involved three research phases: first, an investigation to determine what the general public believes to be some of the causes of inadequate reading ability, second, an assessment of

teachers' and school librarians' opinions regarding this issue and, finally, a direct examination of students' (Gr. 2-12) reading ability in relation to time spent in various other activities and their attitudes toward television and other media.

PHASE 1

The purpose of this phase of the investigation was to determine which factors the general public felt are important in influencing the development of reading abilities. As mentioned in the introduction, televison viewing has been accused of having a negative influence on reading ability. It is generally assumed that the general public, especially parents, holds this opinion. However, recent research has demonstrated that many other environmental and personal factors also play an important role in the development of reading abilities. The present research was designed to assess which factors the general public felt were important influences on reading ability. The results from this phase of the investigation were used to develop questionnaires in subsequent phases of the research.

Methodology

Two thousand questionnaires were mailed to a random sample of people in the province. This sample was randomly selected from all current telephone directories for the province. A total of 453 of the questionnaires were returned.

Two forms of questionnaires were distributed - each included 20 variables which were established as possible influences of reading ability. These variables encompassed five factors: (a) five reading variables (e.g., reading good quality material), (b) five television variables (e.g., watching a lot of TV), (c) three school variables (e.g., good teachers), (d) two home variables (e.g., good parent-child relations), and (e) five personal variables (e.g., high intelligence). For each variable, both the positive and negative dimensions were utilized. For ex-

ample, the statement "Reading good quality material" would be included on one form of the questionnaire, while "Reading poor quality material" would be included on the other form of the questionnaire.

Summary of Main Results

Respondents were asked to indicate how important they felt each of the variables was in influencing the development of reading ability. Ratings were made on a five-point scale (1 = Helps Reading Ability Very Much, 5 = Hampers Reading Ability Very Much) - see Table 1. The following 10 variables were rated as most helpful in the development of reading ability: (a) reading a lot (1.08), (2) good teachers (1.14), (3) going to the library (1.23), (4) reading good quality material (1.34), (5) many reading materials in the house (1.35), (6) family members reading often (1.38), (7) positive attitude toward school (1.41), (8) family members often reading to child (1.52), (9) high intelligence (1.59) and (10) good parent-child relations (1.65).

Most of these variables are related to reading activities. This indicates that the general public believes that reading abilities are helped mostly through positive reading experiences, e.g., many reading materials in the house, going to the library, and reading a lot. In addition, several other positive experiences, e.g., good teachers, positive attitude toward school, and good parent-child relations were rated as helping the development of reading abilities.

The 10 variables which were rated as least helpful in the development of reading ability were as follows: (a) low intelligence (4.34), (2) poor teachers (4.25), (3) few reading materials in the home (4.12), (4) family members seldom reading (4.11), (5) poor parent-child relations (4.08), (6) family members seldom reading to child (4.06), (7) negative attitude toward school (4.02), (8) watching a lot of TV (4.00), (9) few educational facilities in school (3.98) and (10) reading poor quality material (3.93).

These variables are distributed between school, home and reading factors. Interestingly, only one television factor (watching a lot of TV) was rated as an important variable in hampering reading ability. Many of these variables are the negative dimension of the variables which were rated as most helpful in the development of reading abilities.

Conclusions

The major purpose of this part of the investigation was to test the assumption that the general public believes TV to be a major cause of low reading achievement. This hypothesis was not fully supported. In general terms, this sample of respondents indicated that they believed that a variety of factors influence reading ability. Included in these factors are the quality of the teacher, quality of reading materials, attitude toward school, family reading habits, and watching a lot of TV. Therefore, as past research has shown, many factors are responsible for influencing reading achievement, with television playing a minor role in this relationship.

PHASE II

The second phase of this investigation sought the opinions of teachers and school librarians regarding the factors which may influence a child's reading ability. Teachers are in a unique position which allows them to be keen observers of the variations in children's reading abilities. Their opinions regarding the factors influencing reading achievement should, therefore, be valid perceptions. A second purpose of this phase of the research was to compare teachers ratings of the importance of various factors on the development of reading ability with the ratings obtained from the respondents in the first phase of the research.

Methodology

All of the ACCESS Associated Schools received five teacher questionnaires, which were randomly distributed to teachers in the school, and one questionnaire

for the school librarian. Approximately 385 teacher questionnaires and 80 librarian questionnaires were distributed, of these 223 and 44 questionnaires were returned, respectively.

The teachers and librarians were asked the same question regarding the factors which influence reading ability as the participants in the first phase of this investigation. The thirteen variables involved in the teacher and librarian questionnaires were chosen from the previous ratings obtained in the initial research phase. Approximately half of these variables were previously rated as most helpful in influencing reading ability, while the other half were previously rated as least helpful.

Summary of Main Results

Respondents were asked to indicate the extent each of the variables helped or hampered the development of reading abilities. Ratings were made on a five-point scale (1 = Helps Reading Ability Very Much, 5 = Hampers Reading Ability Very Much). There were no significant differences in ratings between teachers and librarians on any of these variables, therefore, their responses were combined.

The teachers rated the variable "Reading a lot" (1.14) as most helpful in the development of reading abilities, while the variable "Family members seldom reading" (4.44) as least helpful in the development of reading abilities. Several differences emerged between ratings made by the general public and those made by the teachers. Specifically, teachers rated a positive attitude toward school as being more helpful for reading achievement than the general public. Compared with ratings made by teachers, the group of respondents in the first phase of the research felt that reading good quality material and high intelligence were more important in helping the development of reading achievement. Teachers rated the variable "Family members seldom reading" as more important in hampering this development. These comparisons are presented in Table 1.

Although these are statistically significant differences between the two groups of respondents, the actual differences in ratings are very small. The largest difference between the two groups is 0.44. With minor exceptions, it appears that teachers and the general public concur on which factors are an important influence on the development of reading abilities.

Conclusions

The teachers who responded to the questionnaire were generally in agreement with the respondents in the first phase of the research. Specifically, reading habits, attitude toward school and home environment all seem to play an important role in the development of reading ability.

PHASE III

The final phase of this investigation had two objectives: (a) to investigate children's reading and TV viewing habits and attitudes toward the various media forms and (b) to directly assess the relationship between reading achievement, television viewing and other activities and attitudes. Questionnaires were distributed to children in grades 2, 4, 6, 8, 10 and 12. The questionnaires used for each grade level requested basically the same information, but were designed to be age-appropriate. All participants were from schools in a town in rural Alberta.

Summary of Main Results

A summary of the discussion below is presented in Table 2.

Media Usage

Students in grades 4 and 6 were the heaviest users of TV. A steady decrease in the hours spent watching TV occurred after grade 6, with grade 12 students watching the least amount of television. The figures obtained are consistent with figures reported in previous research studies. The heaviest TV viewers

(grade 4 students) watched an average of five hours of television a day, while the lightest viewers watched an average of 2.65 hours per day. There was a steady decrease across the grade levels in the reported number of books read in one month. The largest decrease occurred between grade 6, where an average of 14 books were read, and grade 8, where an average of 4 books were read per month. Library visits for all grade levels ranged between 3-5 visits per month. It should be noted that the accuracy of these figures obtained from students in the lower grade levels is uncertain, as some students had difficulty answering these questions.

Attitude Toward Media

The extent of enjoyment of television viewing was fairly consistent across the grade levels. Grade 12 students enjoyed television viewing the least. It might be expected that since the amount of time spent watching TV decreased after grade 6, enjoyment would also decrease. With the exception of grade 12 sutdents, however, this does not appear to be the case.

There was a decrease in the extent of enjoyment of reading across the grade levels. This decrease runs parallel to the decrease in the number of books read monthly from grades 2 to 12. The reported number of books read monthly by students in grades 2, 4 and 6 seems unusually high. Although asked not to, perhaps these students were including schoolbooks in their estimates.

Students in grades 8 and 10 believed they learned more from television than from books. All of the other students felt they learned more from books than from television. These results cannot be explained by the amount of TV viewing of Grades 8 and 10 students or the amount of enjoyment obtained from watching television. The favourite type of television program for this group of students was situation comedies, which are not traditionally viewed as highly educational programs.

Parental Control of Media

The amount of control exerted by parents over the amount and content of TV viewing was highest for students in grade 4. These students were the heaviest viewers of TV. The control of TV viewing decreased substantially in the higher grade levels. The same pattern emerged for parental control of the amount and content of reading. Specifically, most control was exerted on grade 4 students and least on grade 12 students.

Influences on Reading Achievement

The relationship between TV viewing and reading achievement scores was the major focus of this phase of the investigation. The results revealed a significant negative relationship between these two variables, only for students in grades 4 and 6. For all the other grade levels, reading achievement scores were not influenced by the amount of time spent viewing TV. These results are difficult to interpret since the indices of reading achievement were not uniform across the six grade levels. The students in grades 4 and 6 were the heaviest viewers of television, this may account for the negative influence of their TV viewing on reading achievement. It must be remembered that this is a correlational relationship, thus, it does not imply causation.

For all grade levels high reading achievement scores were associated with positive reading experiences such as enjoying reading, often going to the library and reading more often. For some of the grade levels, parental involvement in reading was associated with higher levels of reading achievement.

In conclusion, based on results of this investigation it appears that television is not the greatest culprit in influencing reading achievement. Some evidence indicated that excessive TV viewing negatively influenced reading achievement scores, but this was not consistent across the grade levels. The general public and teachers in the province also believe that television is only one of

many factors which influence reading achievement. Other factors felt to be important in increasing reading achievement are positive reading experiences and home and school environments which are supportive with respect to a child's reading habits.

TABLE 1

COMPARISON OF THE RESPONSES OF THE GENERAL PUBLIC AND TEACHERS

VARIABLES	PUBLIC*	LIBRARIANS* & TEACHERS
POSITIVE VARIABLES		
Reading a lot	1.08	1.14
Going to the library	1.23	1.36
Reading good quality material	1.34	1.61
Many reading materials in the home	1.35	1.34
Positive attitude toward school	1.41	1.26
High intelligence	1.59	1.82
NEGATIVE VARIABLES		
Poor teachers	4.15	4.24
Family members seldom reading	4.11	4.44
Poor parent-child relations	4.08	3.94
Family members seldom reading to child	4.06	4.19
Watching a lot of TV	4.00	4.03

*Ratings made on a 5-point scale (1 = Helps reading ability very much, 5 = Hampers reading ability very much).

TABLE 2

COMPARISONS BETWEEN GRADE LEVELS FOR

VARIOUS MEASURES

VARIABLES	GRADE LEVEL					
	2	4	6	8	10	12
Media Usage						
(a) Hours spent viewing TV daily	3.3	5.0	4.7	4.1	3.73	2.65
(b) Number of books read in one month	18.5	14.3	14.4	4.3	4.11	1.97
(c) Library visits per month	5	3	3	3	5	3
Enjoyment of Media*						
(a) TV viewing	3.5	3.6	3.4	3.3	3.47	3.07
(b) Books	3.6	3.4	3.2	2.6	2.93	2.73
Parental Control of Media**						
(a) Amount of TV viewing	49%	76%	41%	26%	16%	19%
(b) Content of TV viewing	48%	81%	66%	33%	11%	13%
(c) Amount of reading	5%	14%	3%	2%	0%	0%
(d) Content of reading	28%	83%	63%	24%	7%	16%
Which media do students believe they learn most from?						
(a) Books	72%	81%	84%	32%	37%	62%
(b) Television	28%	19%	16%	68%	63%	38%

*Rated on a 4-point scale (1 = not at all, 4 = very much).

**Percentage of parents controlling media usage.